

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-20 are pending in this application. Claims 1-15 are amended, support for which is found in the original claims. Claims 16-20 are new, support for which is found in at least Figs. 5-6 and 9-7, and paragraphs [0081] to [0085] and [0105] to [0109] of the application as published. No new matter is added.

In the outstanding Office Action, the drawings were objected to; Claims 1-9 and 11-15 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. 2002/0149651 (Fukumoto); and Claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over Fukumoto in view of U.S. 2004/0021645 (Kobayashi).

Reconsideration of the objection to the drawings is respectfully requested for the following reasons. The Office Action objected to the drawings, stating that the “time period measurement means” recited in Claims 9-10 and 13-15 must be shown in the drawings. It is respectfully submitted that a “time period measurement means” is shown in Figs. 3 and 7 as originally filed. As to Fig. 3, the position determination process section 102, as described in the specification, “determines the press start time of the front surface of the panel and the press confirmation time,” “determines the time at which the detected data value starts varying as the press start time,” and “determines the time at which the detected data value has become stable and a predetermined time period has elapsed as the press confirmation time.”<sup>1</sup> Further, as to Fig. 7, the position determination process section 112, as described in the specification, “determines the press start time and the press confirmation time,” “determines a time at which the detected data value is varying as a press start time and a time at which after the detected data value has become stable and a predetermined time period has elapsed as a press

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<sup>1</sup> Specification at p. 23, l. 15-23.

confirmation time,” and “measures a time period from the press start time until the press confirmation time with for example a timer disposed in the input apparatus 100b.”<sup>2</sup> Therefore, it is respectfully submitted that the “time period measurement means” as recited in the claims is shown in the drawings and the drawings thus comply with 37 C.F.R. §1.83(a).

The rejections in view of Fukumoto are respectfully traversed in view of amended Claim 1, which recites:

An input apparatus for performing an input operation on a front surface of a panel, comprising:

input detection means for detecting an input operation and confirming whether the input operation is a pressing operation or a touching operation being performed on the front surface of the panel;

waveform generation means for generating a first signal waveform having a first amplitude when the input detection means detects that the input operation is being performed, and generating a second signal waveform having a second amplitude which is larger than the first amplitude after the input detection means confirms the input operation is a pressing operation; and

panel deforming means for deforming the panel corresponding to the signal waveforms generated by the waveform generation means.

The Office Action states that Fukumoto describes a waveform generation means as defined in Claim 1, citing paragraph [0168] of the U.S. 2002/0149561, the prior printed publication of Fukumoto. Applicant respectfully disagrees. At paragraph [0168], Fukumoto describes a CPU 113 which determines whether a touch signal has been input from a touch panel 102, and whether a key operation signal has been input. If the CPU 113 determines that neither a touch signal nor a key operation has been input, it ends the processing and no waveform data is read and an application of a drive signal is not started.<sup>3</sup> However, if the CPU 113 determines that at least one of the touch signal or key operation signal has been input, it first reads from a memory 112 the waveform data of the drive signal to be applied to an oscillatory actuator 115 of the touch panel 102.<sup>4</sup>

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<sup>2</sup> Specification at p. 38, l. 6-19.

<sup>3</sup> See Fukumoto, S101 ‘NO’, Fig. 5.

<sup>4</sup> See Fukumoto, Fig. 5.

At paragraph [0174], Fukumoto describes a PDA 10 can report to a user that an operation input has been approved by way of vibration. As a result, a user can confirm approval of a touch signal being input into the PDA 10 without viewing the screen display.

On the other hand, amended Claim 1 recites, “**waveform generation means for generating a first signal waveform having a first amplitude when the input detection means detects that the input operation is being performed, and generating a second signal waveform having a second amplitude which is larger than the first amplitude after the input detection means confirms the input operation is a pressing operation.**” Fukumoto fails to describe a waveform generation means as defined in amended Claim 1, because Fukumoto merely describes reading from a memory 112 the waveform data of the drive signal if a touch signal or a key operation signal has been input. Fukumoto does not describe a first signal waveform having a first amplitude that is generated while an input operation is being performed, let alone a second signal waveform having a second amplitude that is generated when a pressing operation is confirmed, because Fukumoto only describes a confirmation vibration after a touch signal has been input and approved.<sup>5</sup> Therefore, it is respectfully submitted that the rejection under 35 U.S.C. §102 is overcome as to Claim 1 and any claim dependent therefrom.

Although directed at a different statutory class and/or varying in scope, amended Claims 6-8 share in the above-noted distinctions over Fukumoto. Therefore, it is respectfully submitted that the rejection of Claims 6-8 is also overcome.

Moreover, it is respectfully submitted that Fukumoto fails to describe the features of amended Claim 5, which recites:

The input apparatus as set forth in claim 1,  
wherein when the input detection means detects that the input  
operation is being performed on a portion of the front surface of the panel  
where a pressing operation will not be recognized by the input detection

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<sup>5</sup> Fukumoto, paragraph [0174].

means, the waveform generation means generates only the first signal waveform after the input operation is started until the pressing operation is confirmed.

The Office Action states that paragraph [0348] of Fukumoto describes the features of Claim 5. Applicant respectfully disagrees. Paragraphs [0348]-[0351] describe a process of determining a position of a touch signal on the touch panel 502, where if it is determined that the touch signal has not been input, the CPU 904 ends the vibration control processing 6, and thus no vibration is made. However, if the touched position on the touch panel 502 based on the touch signal (step S702 of Fig. 57) is an operational area, the oscillatory actuators 115a-115d are controlled so as to create oscillator waves that have phases which cause the touched portions to rise or lower with respect to remaining portion of the touch panel 502 so as to create a ‘button’ feeling for a user.<sup>6</sup> However, as noted above, if no touch signal is input, then the vibration control processing 6 is ended without instructing the generation of a drive signal for vibration.<sup>7</sup>

On the other hand, amended Claim 5 recites that “when the input detection means detects that the input operation is being performed on a portion of the front surface of the panel where a pressing operation will not be recognized by the input detection means, **the waveform generation means generates only the first signal waveform after the input operation is started until the pressing operation is confirmed.**” Fukumoto does not describe the features of amended Claim 5, because Fukumoto requires that a touch signal be within an operational area to continue the vibration control processing. In contrast, amended Claim 5 recites that the first signal waveform is generated after an input operation is started “when the input detection means detects that the input operation is being performed on a portion of the front surface of the panel where a pressing operation will not be recognized by

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<sup>6</sup> See Fukumoto, Figs. 59-60.

<sup>7</sup> See Fukumoto, Figs. 57-58.

the input detection means." Therefore, it is respectfully submitted that Claim 5 is further allowable over Fukumoto by virtue of these features.

The rejection in of Claim 9 in view of Fukumoto is also respectfully traversed.

Amended Claim 9 recites:

An input apparatus for performing an input operation on a front surface of a panel, comprising:

input detection means for detecting an input operation and confirming whether the input operation is a pressing operation or a touching operation being performed on the front surface of the panel;

time period measurement means for measuring a time period from when the input operation is detected until the pressing operation is confirmed;

waveform generation means for generating a signal waveform based on a length of the time period measured by the time period measurement means; and

panel deforming means for deforming the panel corresponding to the signal waveform generated by the waveform generation means.

The Office Action relies on paragraphs [0208]-[0209] of Fukumoto to describe a waiting time period between a touch period and a reporting period. Fukumoto states "[t]he vibration control processing 3 is executed when the processing requiring a waiting time is instructed by operation input. Here, "processing requiring a waiting time" means, for example, file data downloading or uploading processing such as reading a web page, mail check processing for checking for e-mail addressed to oneself, start-up processing for starting up an application software, copying or deletion of file data, initialization processing for initializing a data storage area of the memory 112, and the like."<sup>8</sup> However, Fukumoto is silent regarding means for measuring a time period from when the input operation is detected until a pressing operation is confirmed, and means for generating a signal waveform based on a length of the measured time period, as recited in amended Claim 9. Therefore, it is respectfully submitted that the rejection under 35 U.S.C. §102 is overcome as to Claim 9 and any claim dependent therefrom.

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<sup>8</sup> Fukumoto, paragraph [0208], Fig. 14.

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Although directed at a different statutory class and/or varying in scope, amended Claims 13-15 share in the above-noted distinctions over Fukumoto. Therefore, it is respectfully submitted that the rejection of Claims 13-15 is also overcome.

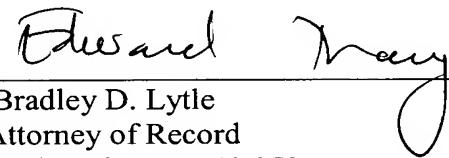
Consequently, in view of the present amendment and in light of the above comments, the outstanding grounds for rejection are believed to have been overcome and the pending claims are believed to be in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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